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| **Major Topics in Course** | --------------------------------------------Instructional Strategy------------------------------------------------------ ( Combination of Problem based learning & Team based learning ) | | | | | | | | | |
| AC circuit characteristics | In class |  |  |  |  |  | |  |  |  |
| Out of class |  |  |  |  |  | |  |  |  |
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| Induction in an AC circuit  In class →  Out of class → | Particular AC induction problem is presented to the groups, with an indication that there are at least three “roads” available to solve this problem. | Note: Each road should lead to the same result. | Each team conducts lab experiments for their “roads”, trying many different configurations and formulas to see if they are headed down the right “road”. |  | Each team streamlines their focus based on previous results, using lab equipment to zero in on the perceived solution to the problem. | |  | Each team presents their results to the class, clearly showing the “road” they chose and how they reached the solution that is presented. |  |  |
| Groups (or teams) are established & study times are agreed to. 3 groups total. | Groups decide which “road” each will travel, start research for each road. |  | Each group analyzes the first set of results from their experiments |  | Each group finalizes their analysis, agree on the results and develop a presentation for the class. | |  |  |  |
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| Resistance in an AC circuit | In class |  |  |  |  |  | |  |  |  |
| Out of class |  |  |  |  |  | |  |  |  |
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| Capacitance in an AC circuit | In Class |  |  |  |  |  | |  |  |  |
| Out of class |  |  |  |  |  | |  |  |  |
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| Understanding and mastering RCL in an AC circuit | In class |  |  |  |  |  | |  |  |  |
| Out of class |  |  |  |  |  | |  |  |  |
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|  | In Class |  |  |  |  |  | |  |  |  |
| Out of class |  |  |  |  |  | |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |
|  | In class |  |  |  |  |  | |  |  |  |
| Out of class |  |  |  |  |  | |  |  |  |